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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,088

05/31/2006

Hiroshi Oshitani

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EXAMINER

COMINGS, DANIEL C

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

06/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,088	Applicant(s) OSHITANI ET AL.	
	Examiner Daniel C. Comings	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 22-55 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restriction

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 22, 25-27, 30, 33 and 50, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor and a branch passage having a second evaporator and a throttling mechanism.

Group 2, claim(s) 23, 28, 31, 34, 46 and 51, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism and a bypass for directing refrigerant directly from the compressor to the second evaporator.

Group 3, claim(s) 24, 29, 32, 35 and 52, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism and a bypass for bypassing the throttling mechanism.

Group 4, claim(s) 37 and 53, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a branch passage having a second evaporator and a throttling mechanism,

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a vapor liquid separator and a bypass for directing refrigerant directly from the compressor to the second evaporator.

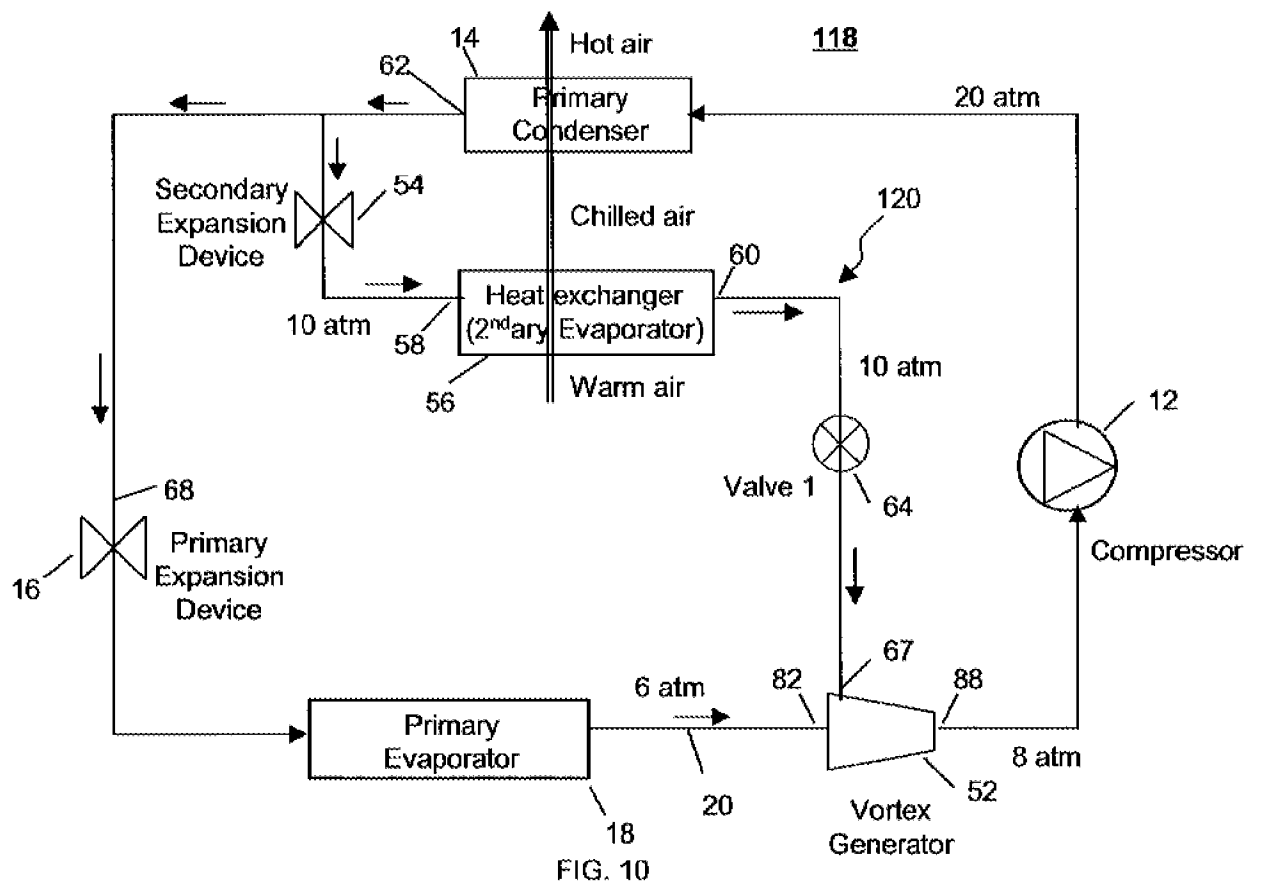
.Group 5, claim(s) 38, 39, 44, 48 and 54, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, two throttling mechanisms at the outlet of the first evaporator and at the inlet of the second evaporator, respectively, and a controller for controlling the throttling devices to introduce high temperature refrigerant to both evaporators for defrosting.

Group 6, claim(s) 40 and 41, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, two throttling mechanisms at the outlet of the first evaporator and at the inlet of the second evaporator, respectively, and a controller for controlling the throttling devices to introduce high temperature refrigerant to only the second evaporator for defrosting.

Group 7, claim(s) 42, 43, 45-47, 49, 55, drawn to Group 6, claim(s) 40 and 41, drawn to a refrigerant cycle device having a compressor, a radiator, an ejector, a first evaporator connected to the suction of the compressor, a second evaporator, a throttling mechanism at the inlet of the second evaporator, and a controller for controlling the throttling device to introduce high temperature refrigerant to both evaporators for defrosting.

The inventions listed as Groups 1-7 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Each group includes a compressor, a radiator, an ejector, two evaporators (one communicating with the suction of the ejector and one communicating with the compressor inlet) and a throttling device at the inlet to the second evaporator. This arrangement is well known in the art as illustrated by US Patent No. 6,651,451 B2 to Cho et al., figure 10 of which is shown below.



It will be noted that the first evaporator (labeled by Cho as a 2ndary Evaporator 56) communicates with the compressor (through vortex generator 52) and the second

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evaporator (labeled by Cho as primary evaporator 18) communicates with the vortex generator (which is taught in col. 8, lines 7-11 and 34-36 of Cho to be an ejector.)

Each of groups 1-7 includes special technical features beyond those known in the art as described above in the listing of the groups and therefore lack unity of invention.

A telephone call was made to attorney Michael Schmidt on Thursday 18 June 2009 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. Comings whose telephone number is 571-270-7385. The examiner can normally be reached on Mon-Fri 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 or 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. C. C./
Examiner, Art Unit 3744
18 June 2009

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744